



**Frequency Stability**

Test Conditions		LTE Band 5 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	2.5ppm
		Deviation (ppm)	Result
50	Normal Voltage	0.0011	PASS
40	Normal Voltage	0.0016	
30	Normal Voltage	0.0006	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0002	
0	Normal Voltage	0.0004	
-10	Normal Voltage	0.0155	
-20	Normal Voltage	0.0007	
-30	Normal Voltage	0.0001	
20	Maximum Voltage	0.0012	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0001	

**Note:**

- 1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.5 V. ; Maximum Voltage =4.2 V.
- 2. The frequency fundamental emissions stay within the authorized frequency block.



# LTE Band 7

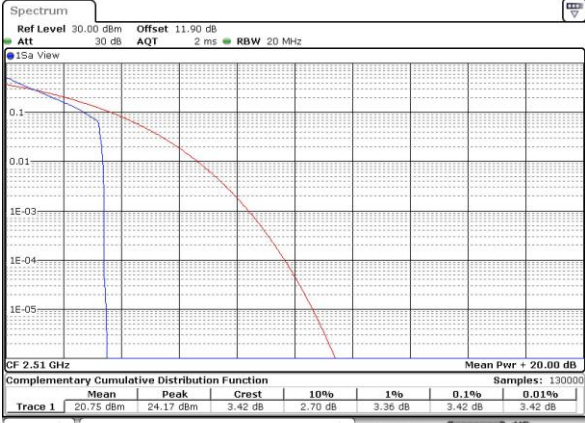
## Peak-to-Average Ratio

Mode	LTE Band 7 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.42	4.23	5.01	5.65	<b>PASS</b>
Middle CH	3.45	4.38	4.93	5.74	
Highest CH	3.42	4.49	5.25	5.8	
Mode	LTE Band 7 / 20MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	5.94	6.20	-	-	<b>PASS</b>
Middle CH	6.58	6.32	-	-	
Highest CH	6.55	6.38	-	-	



LTE Band 7 / 20MHz / QPSK

Lowest Channel / 1RB



Date: 15 AUG 2018 17:44:44

Lowest Channel / Full RB



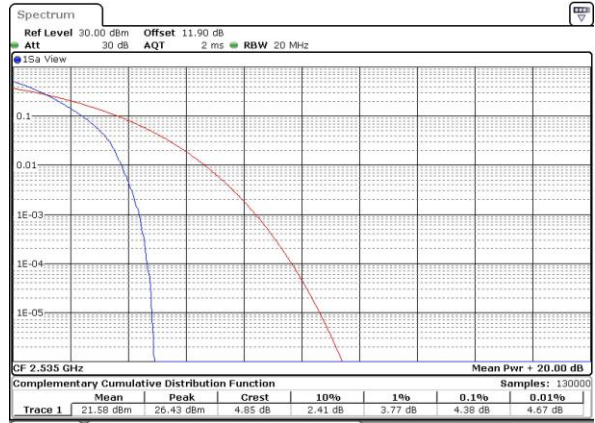
Date: 15 AUG 2018 17:44:55

Middle Channel / 1RB



Date: 15 AUG 2018 17:45:08

Middle Channel / Full RB



Date: 15 AUG 2018 17:45:20

Highest Channel / 1RB



Date: 15 AUG 2018 17:45:36

Highest Channel / Full RB

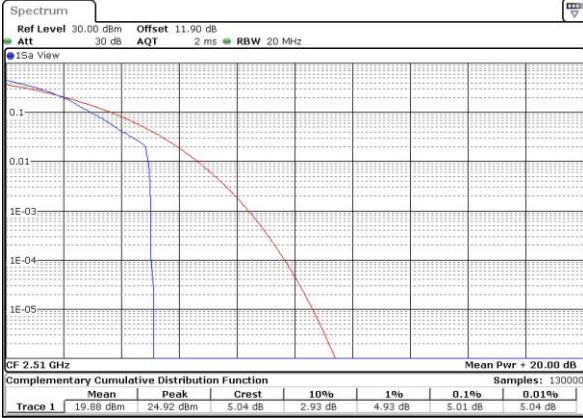


Date: 15 AUG 2018 17:45:55



LTE Band 7 / 20MHz / 16QAM

Lowest Channel / 1RB



Date: 15 AUG 2018 17:39:09

Lowest Channel / Full RB



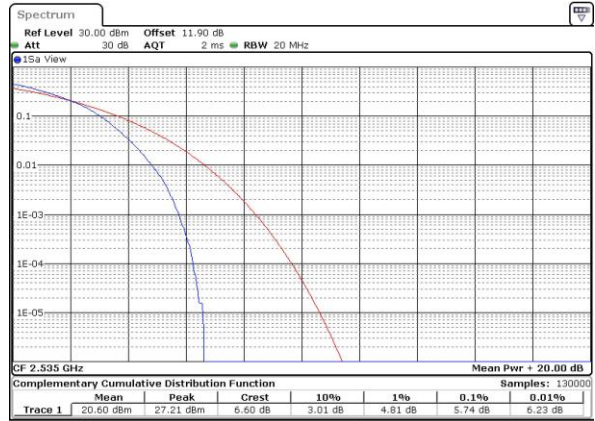
Date: 15 AUG 2018 17:43:21

Middle Channel / 1RB



Date: 15 AUG 2018 17:43:32

Middle Channel / Full RB



Date: 15 AUG 2018 17:43:45

Highest Channel / 1RB



Date: 15 AUG 2018 17:44:20

Highest Channel / Full RB

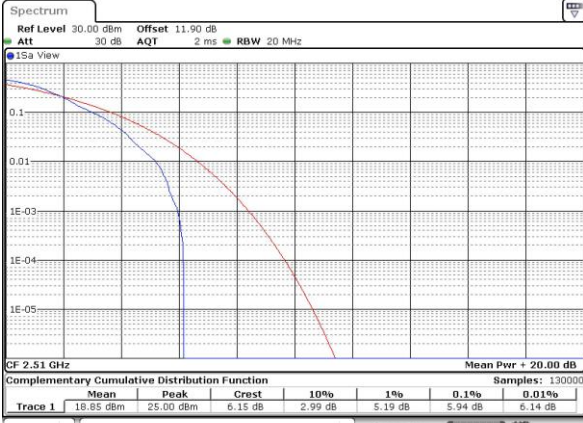


Date: 15 AUG 2018 17:44:33



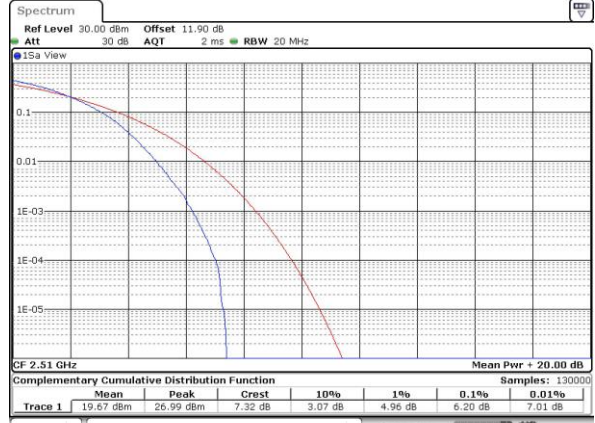
LTE Band 7 / 20MHz / 64QAM

Lowest Channel / 1RB



Date: 15 AUG 2018 17:46:05

Lowest Channel / Full RB



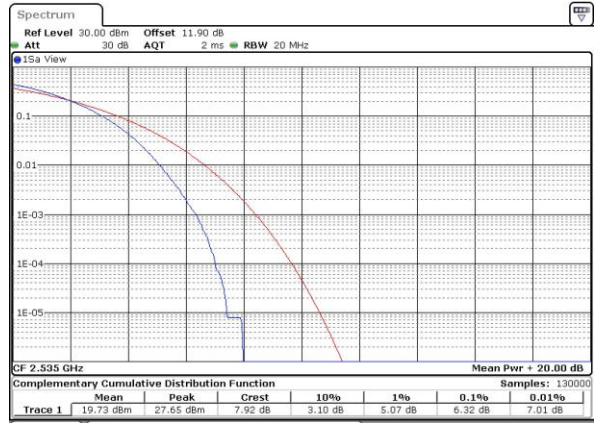
Date: 15 AUG 2018 17:46:18

Middle Channel / 1RB



Date: 15 AUG 2018 17:46:38

Middle Channel / Full RB



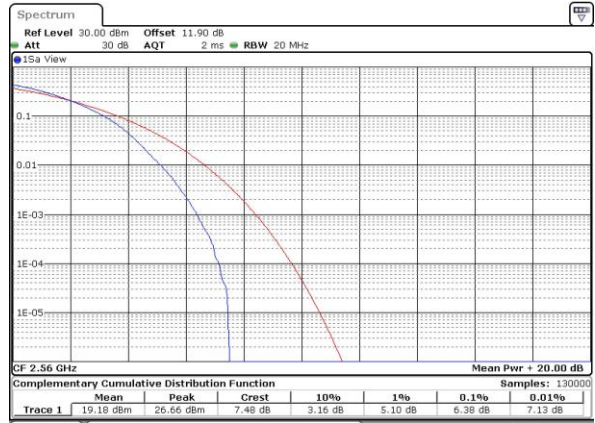
Date: 15 AUG 2018 17:46:58

Highest Channel / 1RB



Date: 15 AUG 2018 17:47:38

Highest Channel / Full RB



Date: 15 AUG 2018 17:48:10



**26dB Bandwidth**

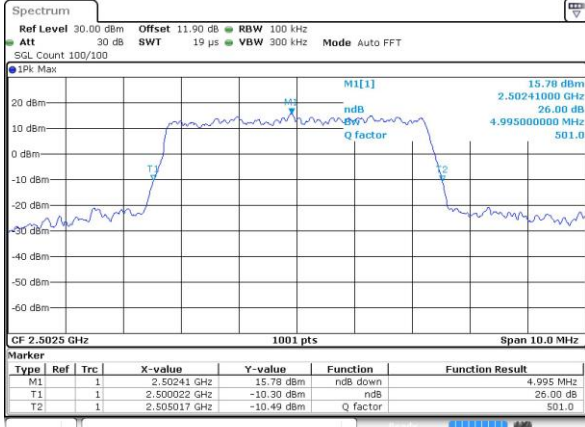
Mode	LTE Band 7 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	5.00	4.88	9.79	9.65	14.18	14.48	20.18	20.22
Middle CH	-	-	-	-	4.93	4.85	9.75	9.73	14.42	14.21	20.10	20.18
Highest CH	-	-	-	-	4.94	4.89	9.83	9.73	14.33	14.51	20.22	20.02
Mode	LTE Band 7 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.87	-	9.83	-	14.15	-	20.14	-
Middle CH	-	-	-	-	4.84	-	9.81	-	14.42	-	20.10	-
Highest CH	-	-	-	-	4.96	-	9.85	-	14.30	-	20.10	-





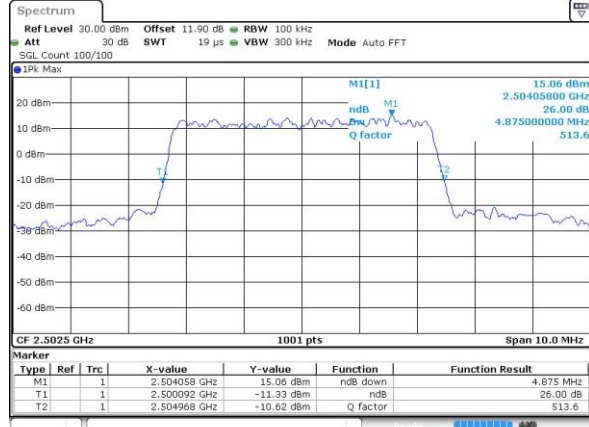
LTE Band 7

Lowest Channel / 5MHz / QPSK



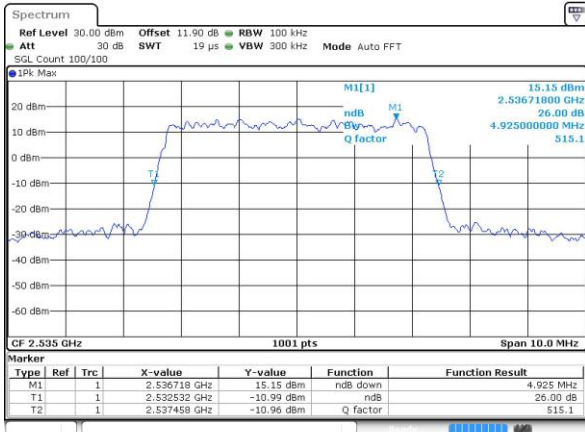
Date: 15 AUG 2018 15:46:25

Lowest Channel / 5MHz / 16QAM



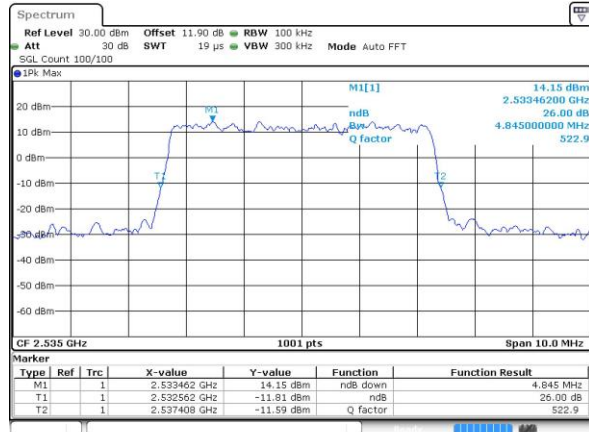
Date: 15 AUG 2018 15:46:36

Middle Channel / 5MHz / QPSK



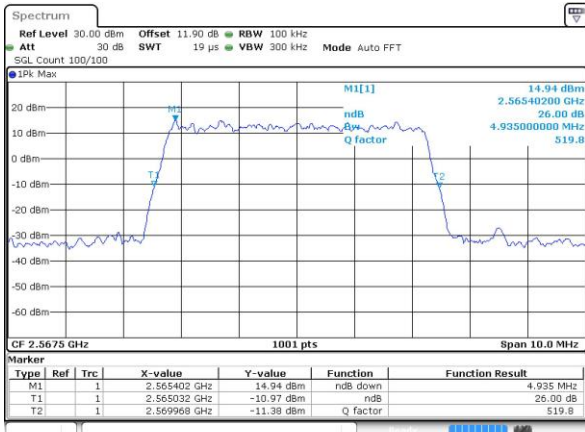
Date: 15 AUG 2018 15:54:14

Middle Channel / 5MHz / 16QAM



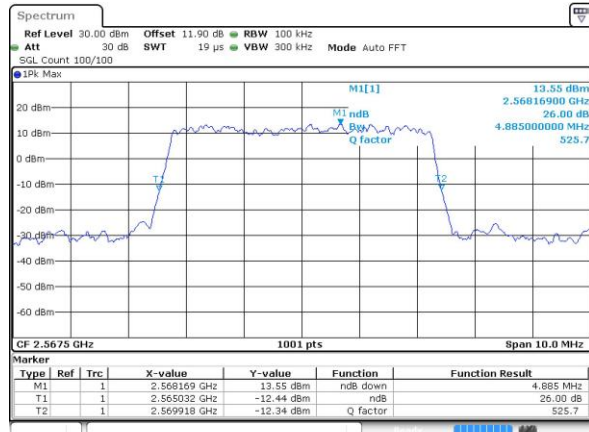
Date: 15 AUG 2018 15:54:25

Highest Channel / 5MHz / QPSK



Date: 15 AUG 2018 15:57:19

Highest Channel / 5MHz / 16QAM

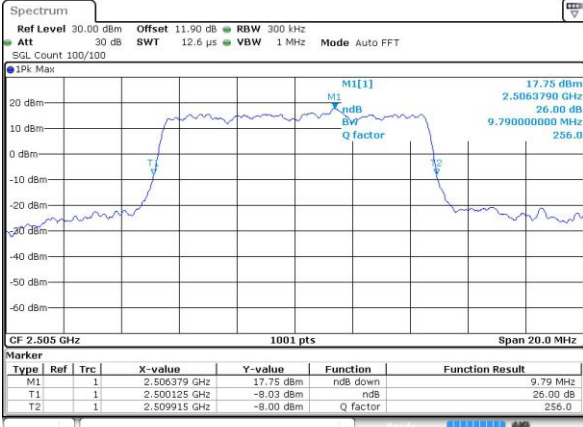


Date: 15 AUG 2018 15:57:30



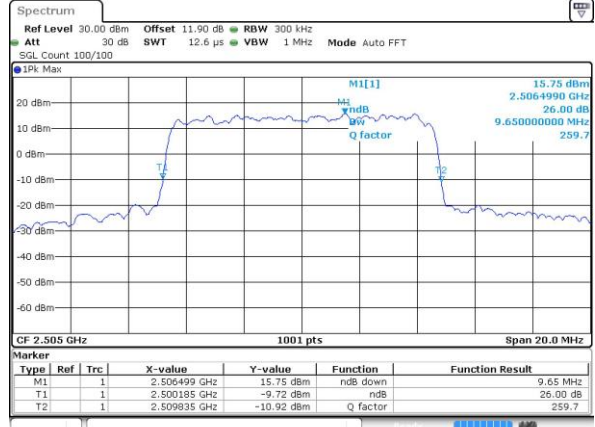
LTE Band 7

Lowest Channel / 10MHz / QPSK



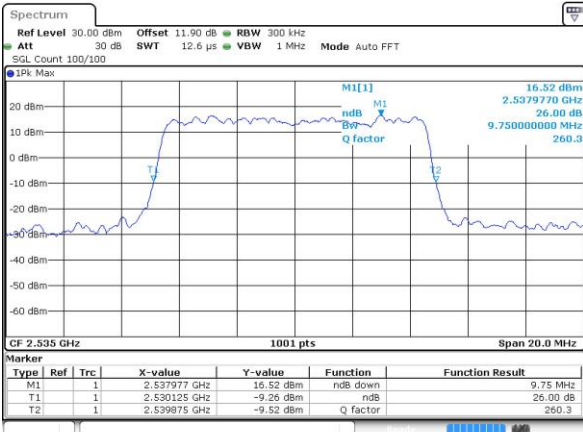
Date: 15 AUG 2018 16:14:27

Lowest Channel / 10MHz / 16QAM



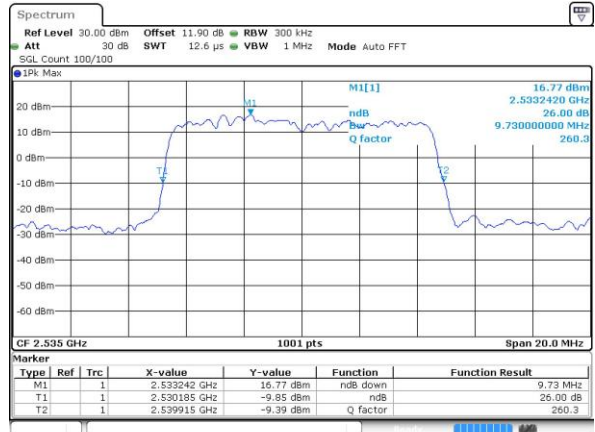
Date: 15 AUG 2018 16:14:39

Middle Channel / 10MHz / QPSK



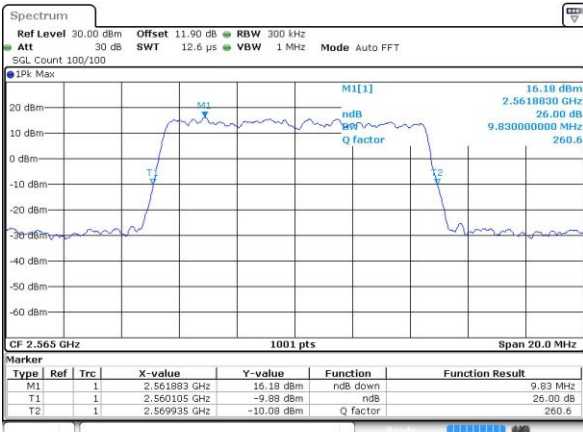
Date: 15 AUG 2018 16:22:14

Middle Channel / 10MHz / 16QAM



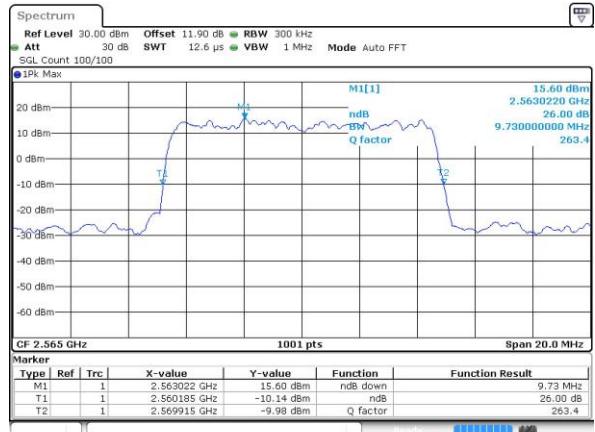
Date: 15 AUG 2018 16:22:26

Highest Channel / 10MHz / QPSK



Date: 15 AUG 2018 16:25:19

Highest Channel / 10MHz / 16QAM



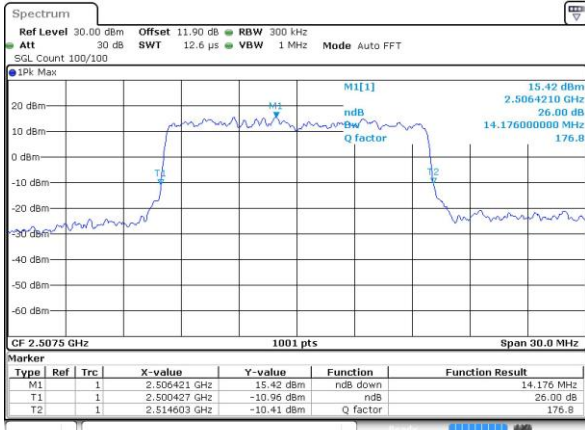
Date: 15 AUG 2018 16:25:31





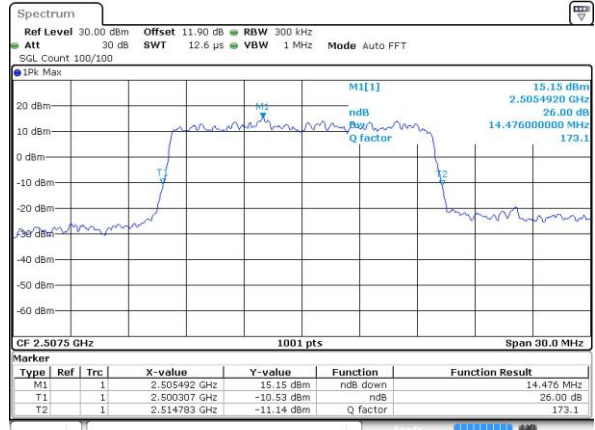
LTE Band 7

Lowest Channel / 15MHz / QPSK



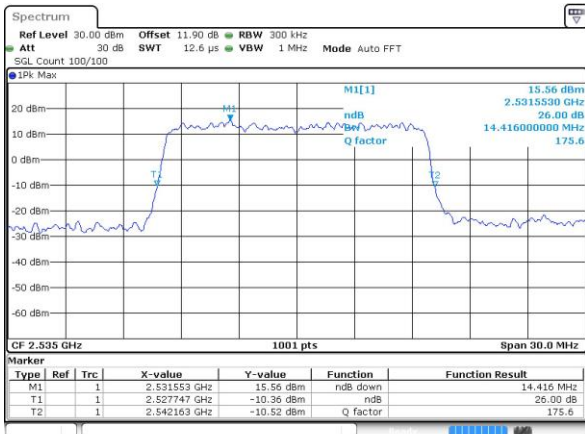
Date: 15 AUG 2018 16:42:27

Lowest Channel / 15MHz / 16QAM



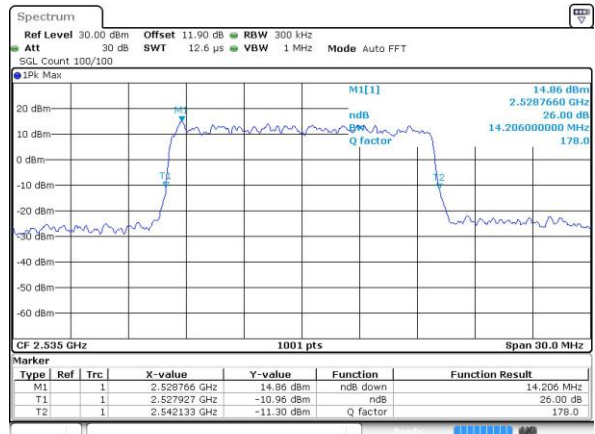
Date: 15 AUG 2018 16:42:38

Middle Channel / 15MHz / QPSK



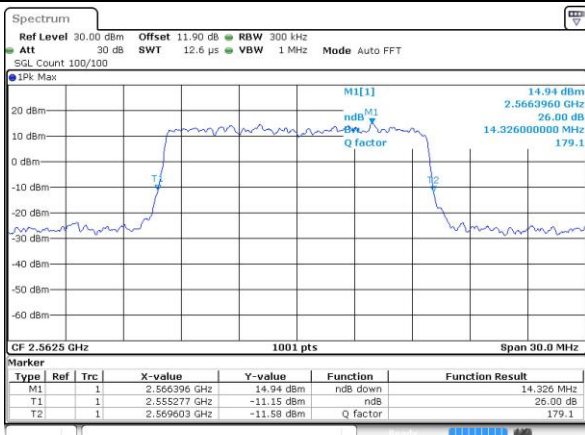
Date: 15 AUG 2018 16:50:15

Middle Channel / 15MHz / 16QAM



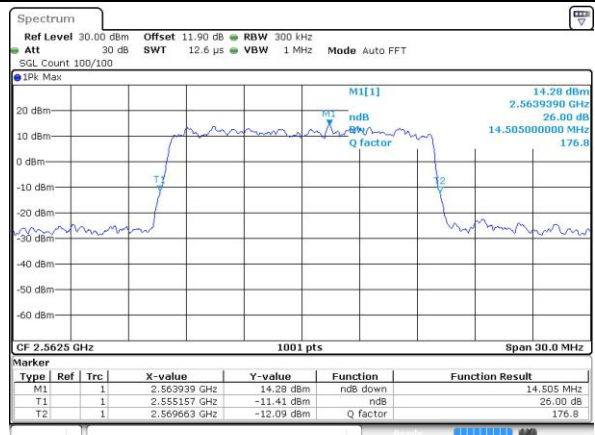
Date: 15 AUG 2018 16:50:26

Highest Channel / 15MHz / QPSK



Date: 15 AUG 2018 16:53:20

Highest Channel / 15MHz / 16QAM

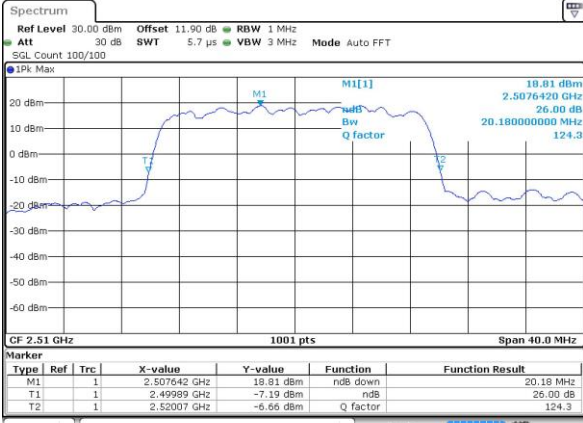


Date: 15 AUG 2018 16:53:31



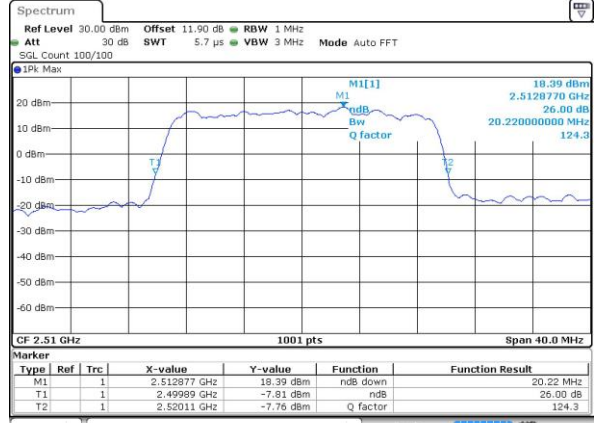
LTE Band 7

Lowest Channel / 20MHz / QPSK



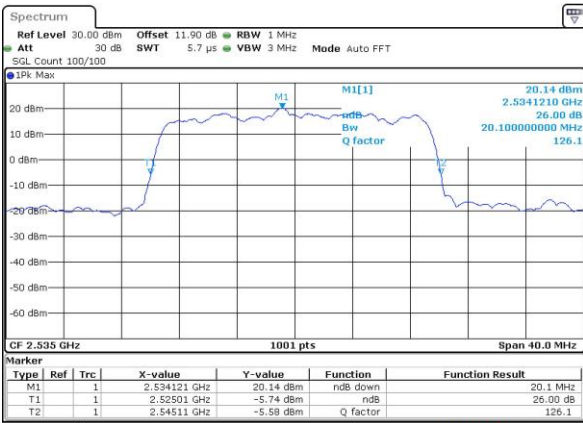
Date: 15 AUG 2018 17:10:28

Lowest Channel / 20MHz / 16QAM



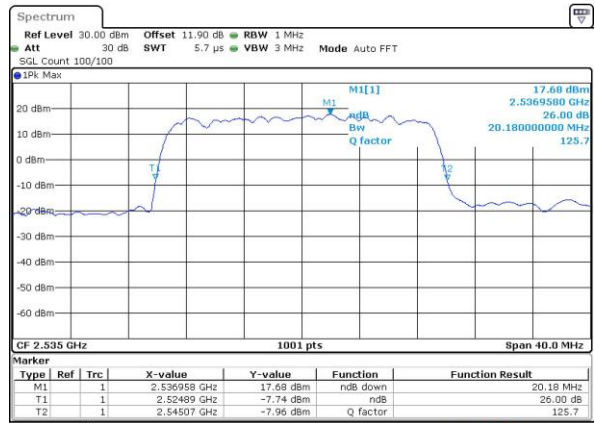
Date: 15 AUG 2018 17:10:39

Middle Channel / 20MHz / QPSK



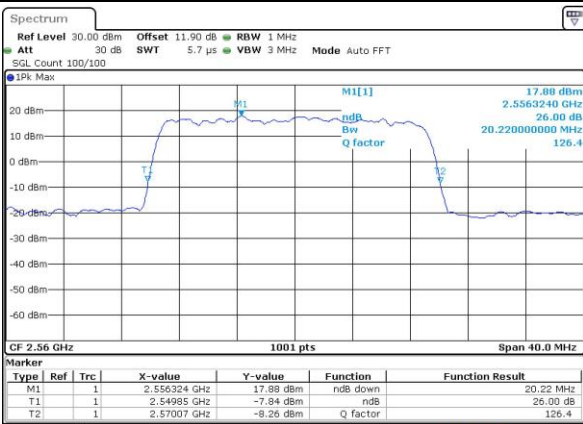
Date: 15 AUG 2018 17:18:15

Middle Channel / 20MHz / 16QAM



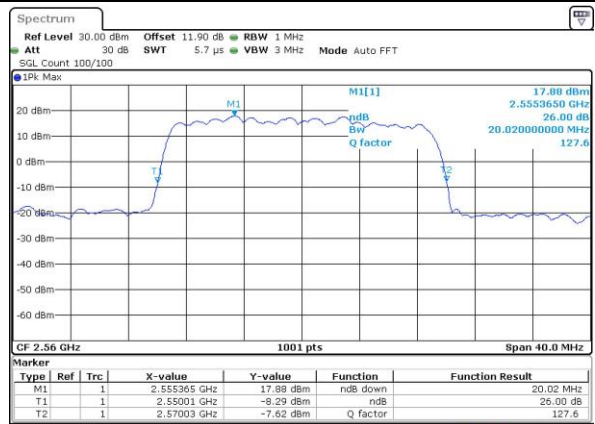
Date: 15 AUG 2018 17:18:26

Highest Channel / 20MHz / QPSK



Date: 15 AUG 2018 17:21:20

Highest Channel / 20MHz / 16QAM

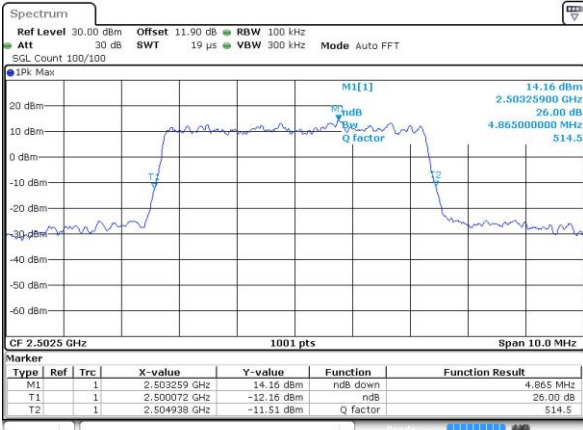


Date: 15 AUG 2018 17:21:31



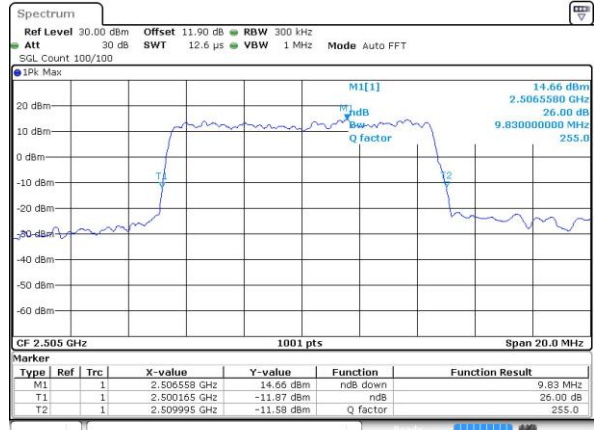
LTE Band 7

Lowest Channel / 5MHz / 64QAM



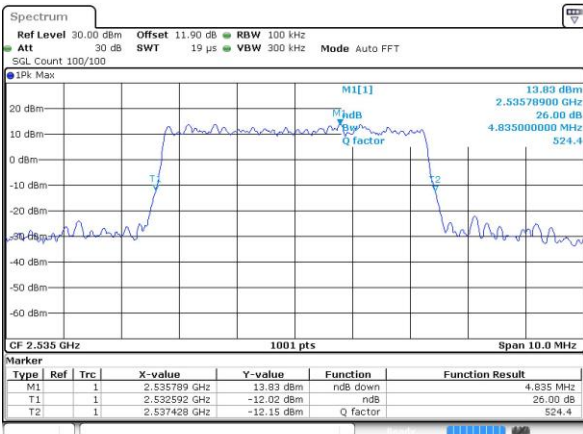
Date: 15 AUG 2018 16:04:55

Lowest Channel / 10MHz / 64QAM



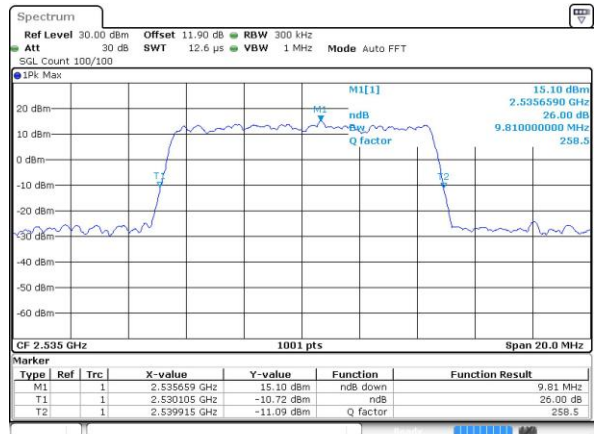
Date: 15 AUG 2018 16:32:56

Middle Channel / 5MHz / 64QAM



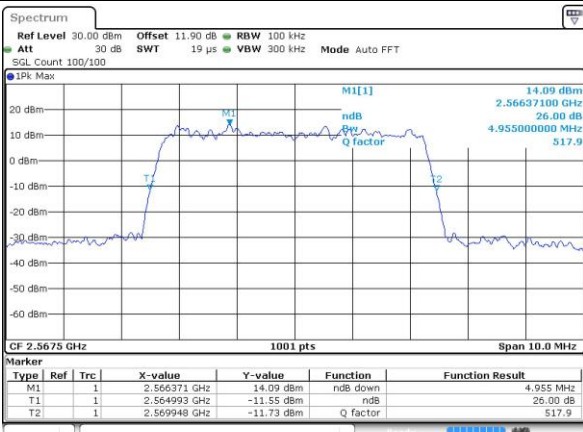
Date: 15 AUG 2018 16:08:49

Middle Channel / 10MHz / 64QAM



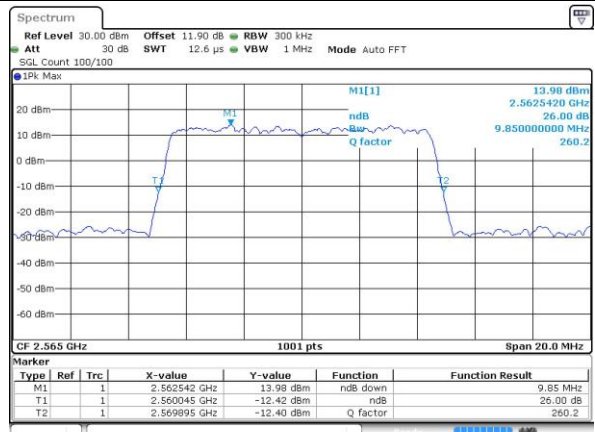
Date: 15 AUG 2018 16:36:49

Highest Channel / 5MHz / 64QAM



Date: 15 AUG 2018 16:10:22

Highest Channel / 10MHz / 64QAM

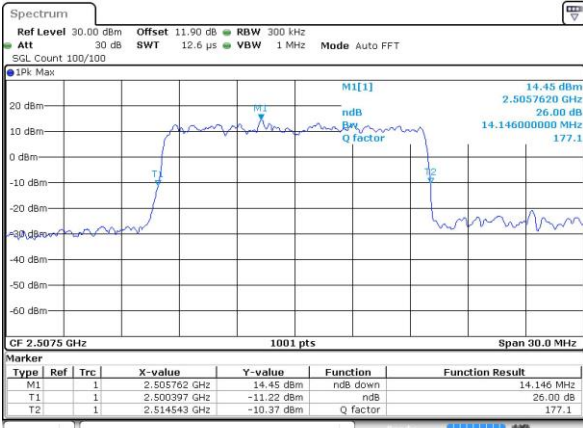


Date: 15 AUG 2018 16:38:22



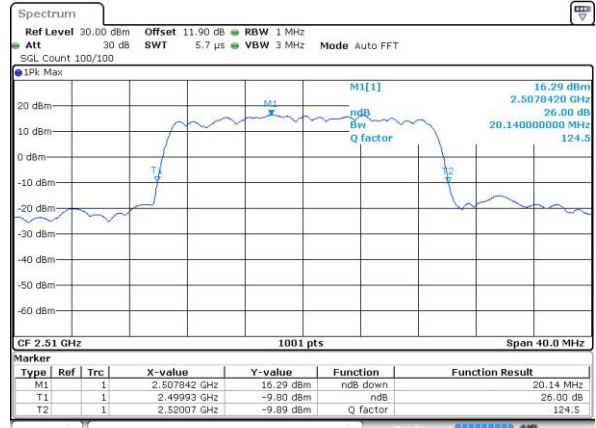
LTE Band 7

Lowest Channel / 15MHz / 64QAM



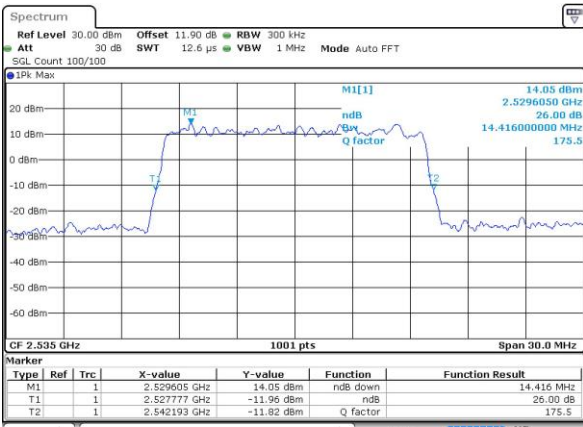
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Lowest Channel / 20MHz / 64QAM



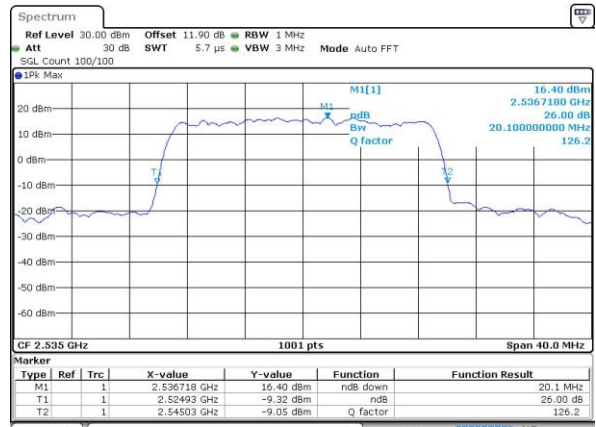
Date: 15 AUG 2018 17:28:56

Middle Channel / 15MHz / 64QAM



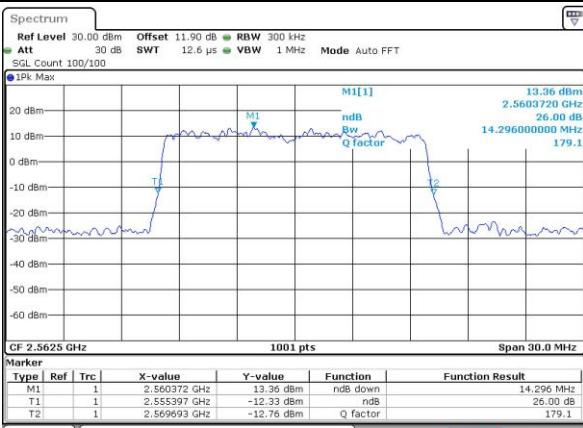
Date: 15 AUG 2018 17:04:50

Middle Channel / 20MHz / 64QAM



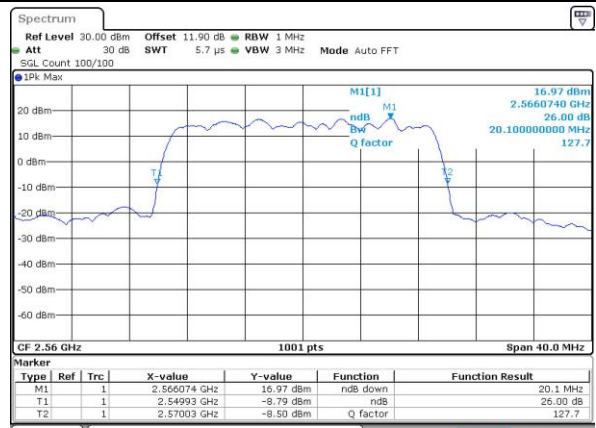
Date: 15 AUG 2018 17:32:50

Highest Channel / 15MHz / 64QAM



Date: 15 AUG 2018 17:06:22

Highest Channel / 20MHz / 64QAM



Date: 15 AUG 2018 17:34:22



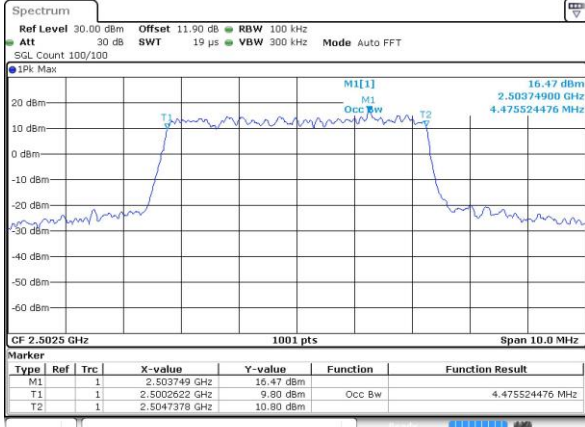
**Occupied Bandwidth**

Mode	LTE Band 7 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.48	4.48	8.99	8.99	13.46	13.46	18.26	18.38
Middle CH	-	-	-	-	4.49	4.52	9.01	9.01	13.52	13.43	18.34	18.42
Highest CH	-	-	-	-	4.47	4.51	9.01	9.01	13.43	13.43	18.38	18.26
Mode	LTE Band 7 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.50	-	8.97	-	13.40	-	18.34	-
Middle CH	-	-	-	-	4.51	-	8.99	-	13.43	-	18.34	-
Highest CH	-	-	-	-	4.51	-	9.05	-	13.43	-	18.38	-



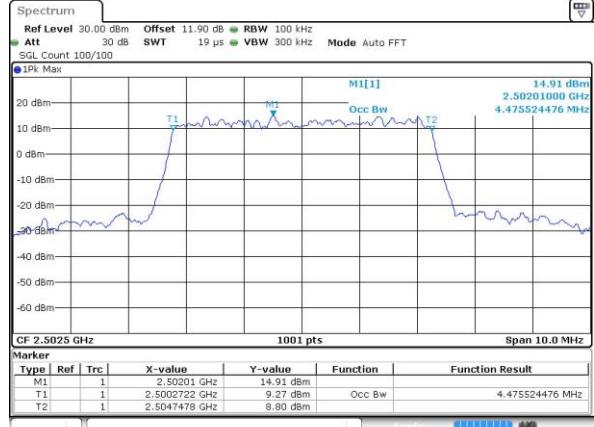
LTE Band 7

Lowest Channel / 5MHz / QPSK



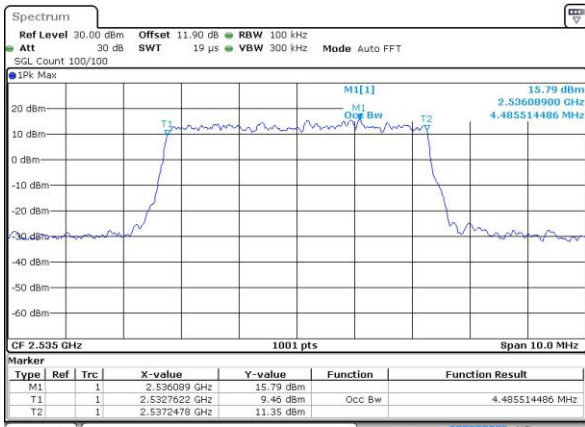
Date: 15 AUG 2018 15:46:02

Lowest Channel / 5MHz / 16QAM



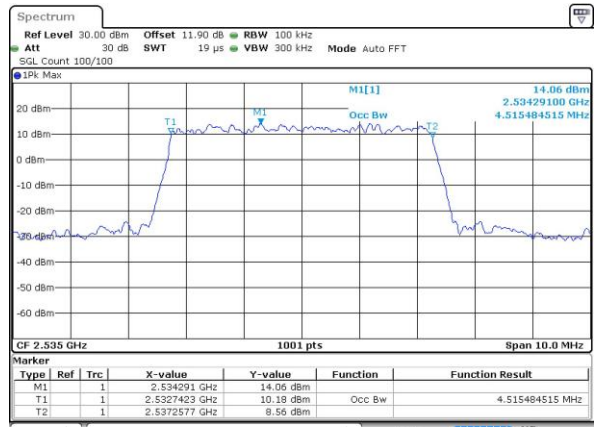
Date: 15 AUG 2018 15:46:13

Middle Channel / 5MHz / QPSK



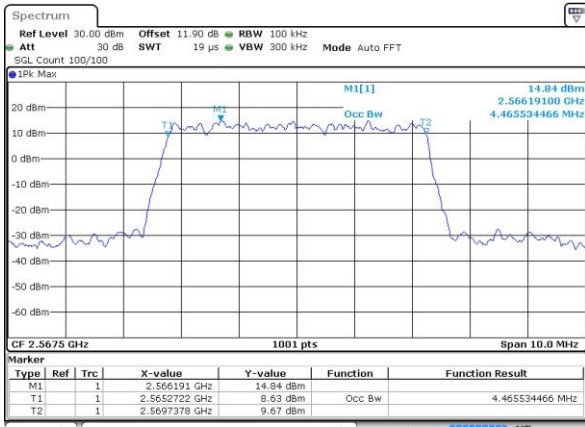
Date: 15 AUG 2018 15:53:51

Middle Channel / 5MHz / 16QAM



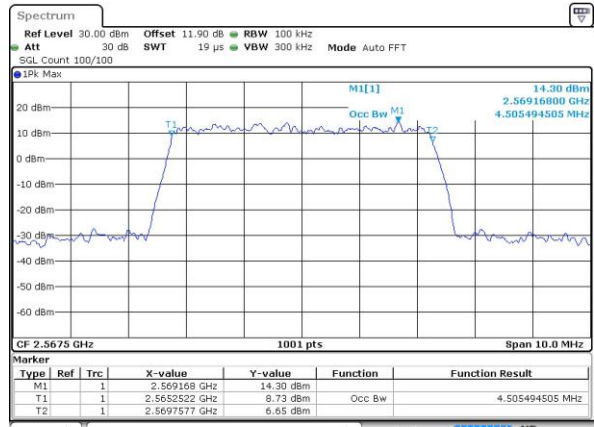
Date: 15 AUG 2018 15:54:02

Highest Channel / 5MHz / QPSK



Date: 15 AUG 2018 15:56:56

Highest Channel / 5MHz / 16QAM



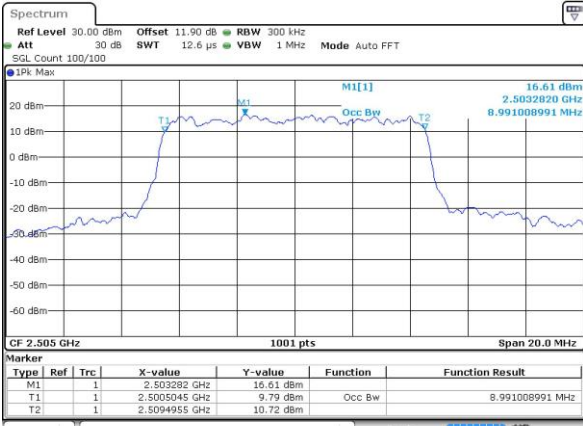
Date: 15 AUG 2018 15:57:07





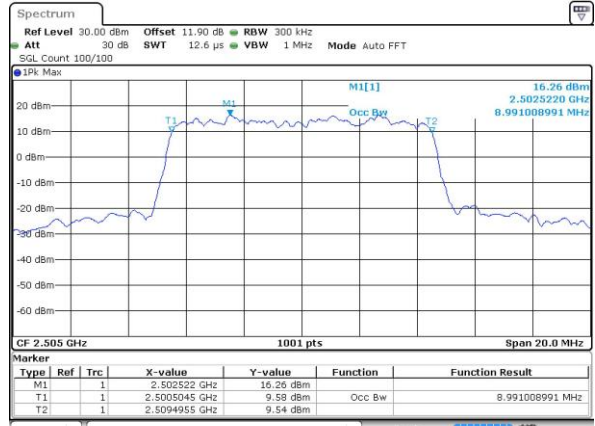
LTE Band 7

Lowest Channel / 10MHz / QPSK



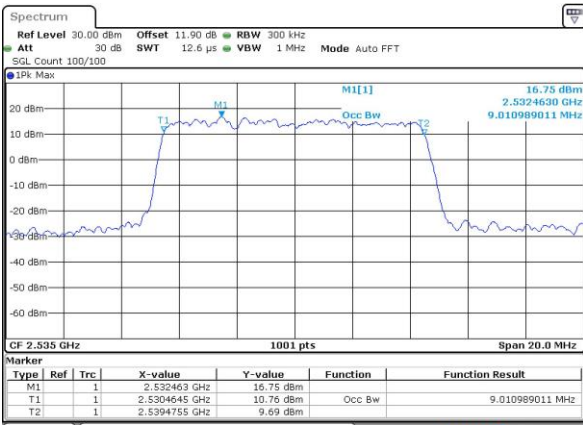
Date: 15 AUG 2018 16:14:04

Lowest Channel / 10MHz / 16QAM



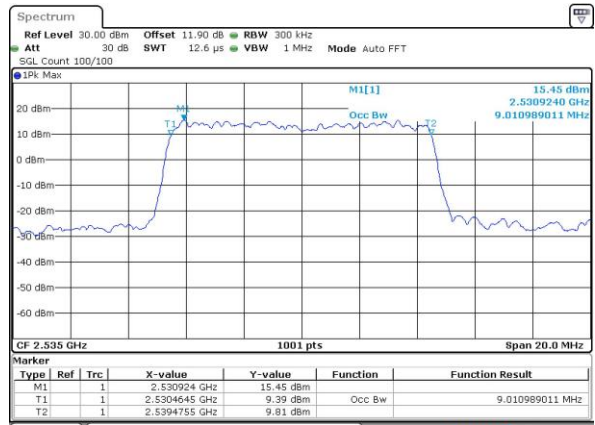
Date: 15 AUG 2018 16:14:16

Middle Channel / 10MHz / QPSK



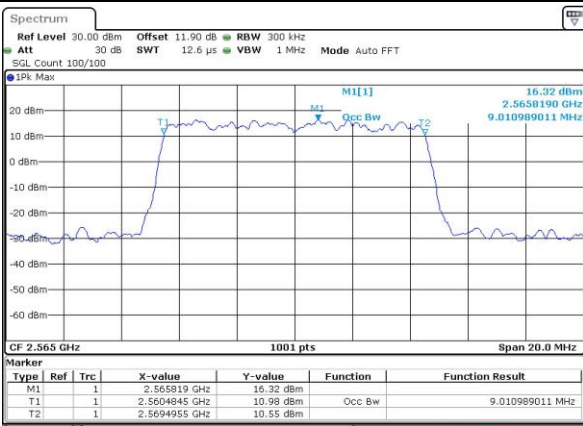
Date: 15 AUG 2018 16:21:52

Middle Channel / 10MHz / 16QAM



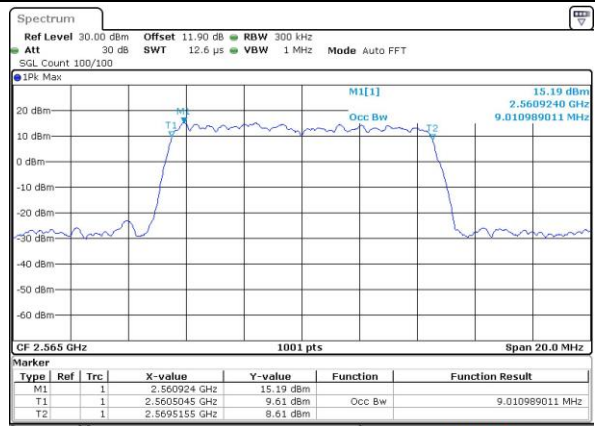
Date: 15 AUG 2018 16:22:03

Highest Channel / 10MHz / QPSK



Date: 15 AUG 2018 16:24:57

Highest Channel / 10MHz / 16QAM

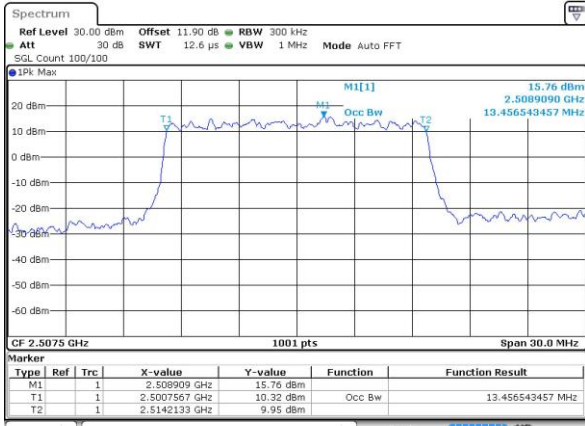


Date: 15 AUG 2018 16:25:08



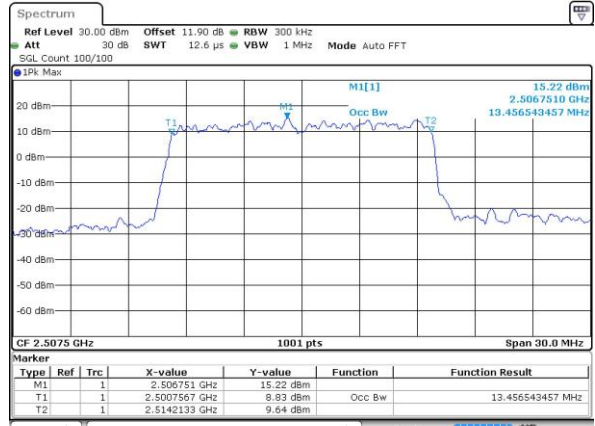
LTE Band 7

Lowest Channel / 15MHz / QPSK



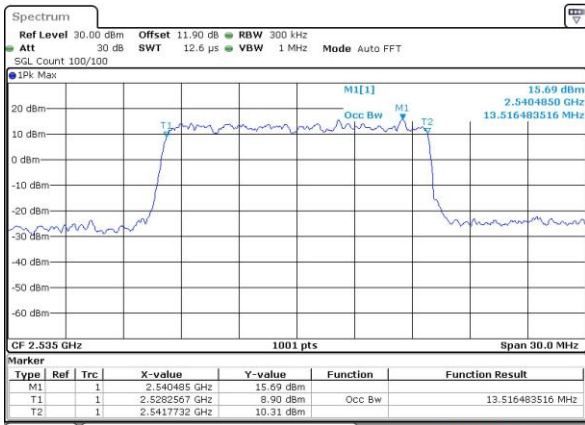
Date: 15 AUG 2018 16:42:04

Lowest Channel / 15MHz / 16QAM



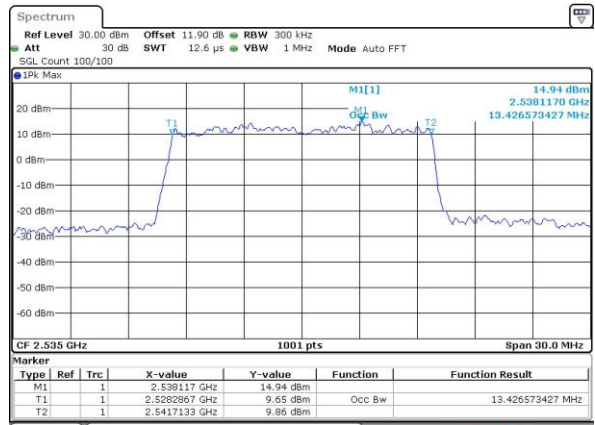
Date: 15 AUG 2018 16:42:16

Middle Channel / 15MHz / QPSK



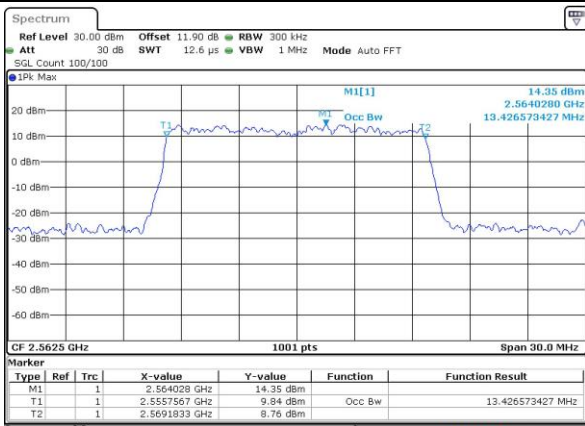
Date: 15 AUG 2018 16:49:52

Middle Channel / 15MHz / 16QAM



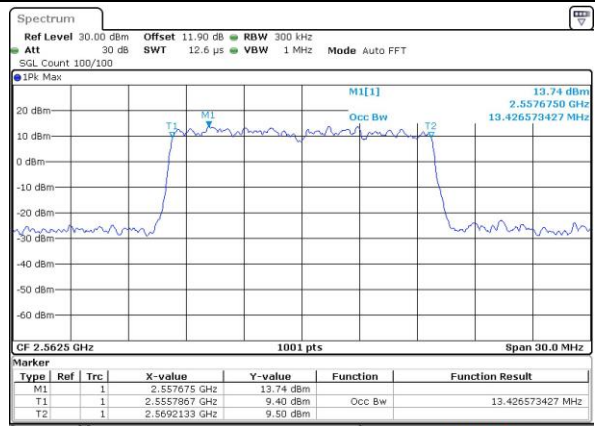
Date: 15 AUG 2018 16:50:03

Highest Channel / 15MHz / QPSK



Date: 15 AUG 2018 16:52:57

Highest Channel / 15MHz / 16QAM

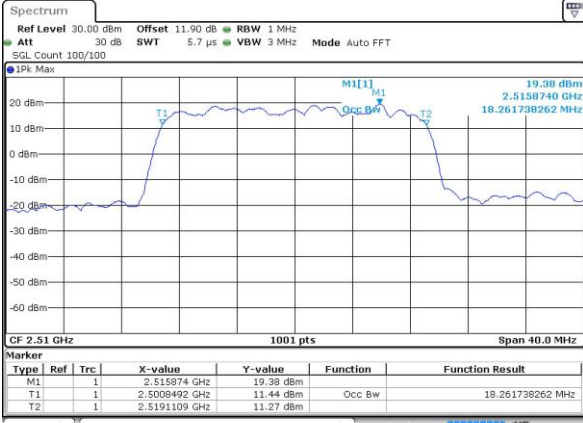


Date: 15 AUG 2018 16:53:08



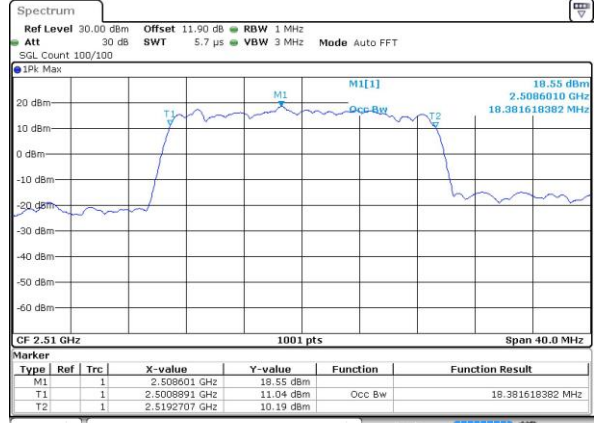
LTE Band 7

Lowest Channel / 20MHz / QPSK



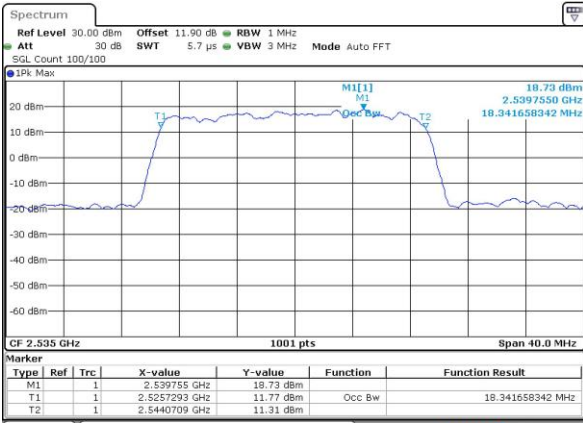
Date: 15 AUG 2018 17:10:05

Lowest Channel / 20MHz / 16QAM



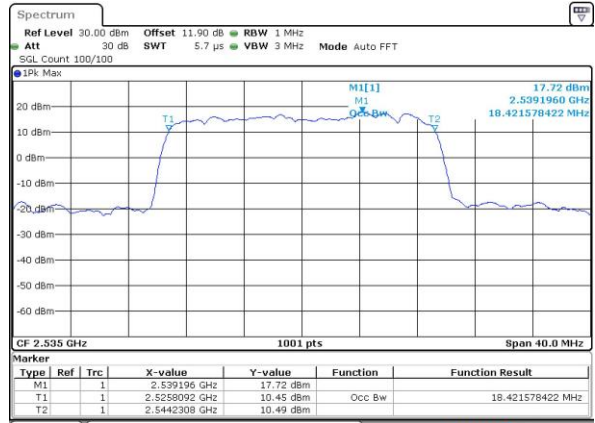
Date: 15 AUG 2018 17:10:16

Middle Channel / 20MHz / QPSK



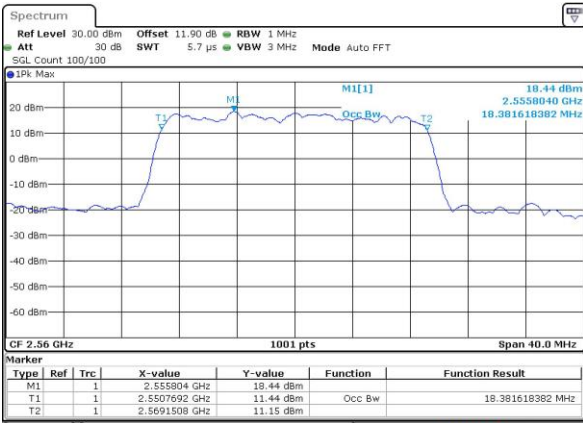
Date: 15 AUG 2018 17:17:52

Middle Channel / 20MHz / 16QAM



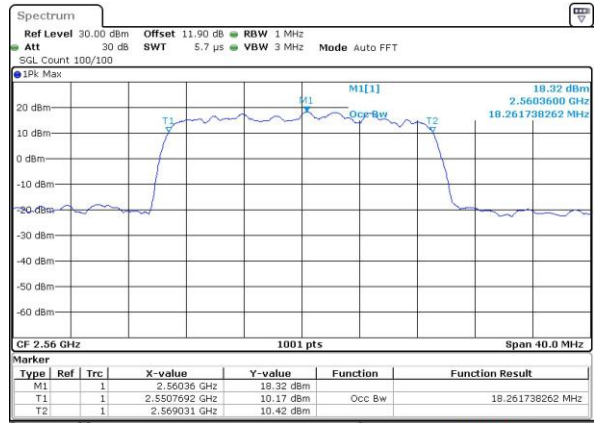
Date: 15 AUG 2018 17:18:04

Highest Channel / 20MHz / QPSK



Date: 15 AUG 2018 17:20:57

Highest Channel / 20MHz / 16QAM

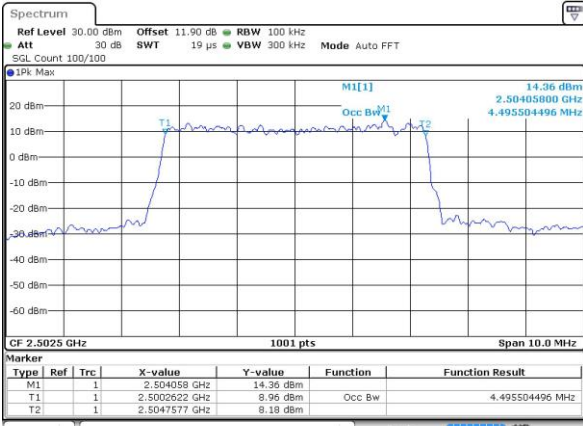


Date: 15 AUG 2018 17:21:08



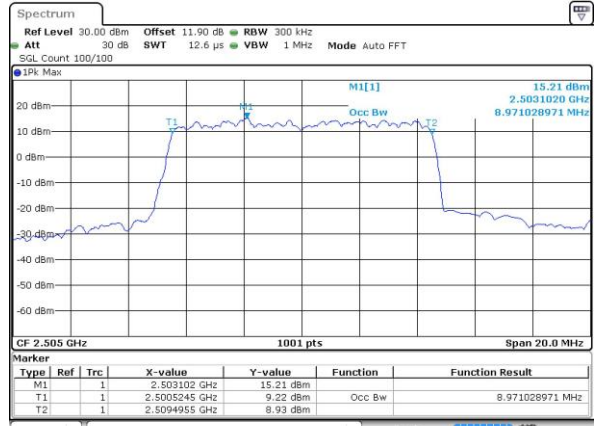
LTE Band 7

Lowest Channel / 5MHz / 64QAM



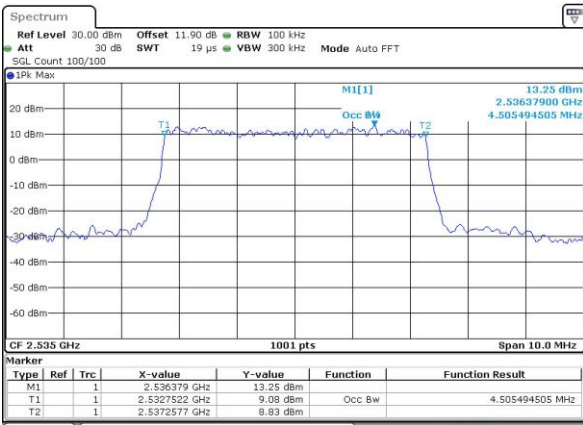
Date: 15 AUG 2018 16:04:44

Lowest Channel / 10MHz / 64QAM



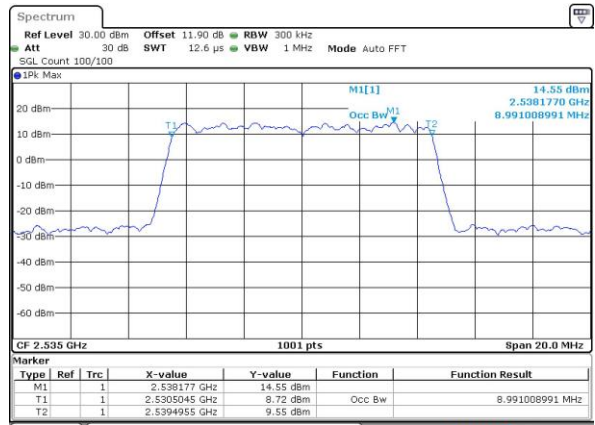
Date: 15 AUG 2018 16:32:44

Middle Channel / 5MHz / 64QAM



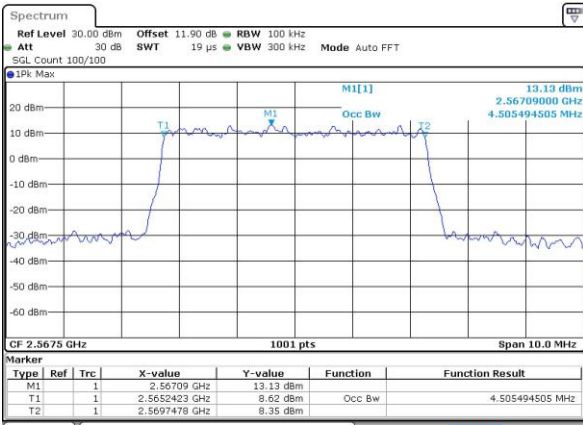
Date: 15 AUG 2018 16:08:38

Middle Channel / 10MHz / 64QAM



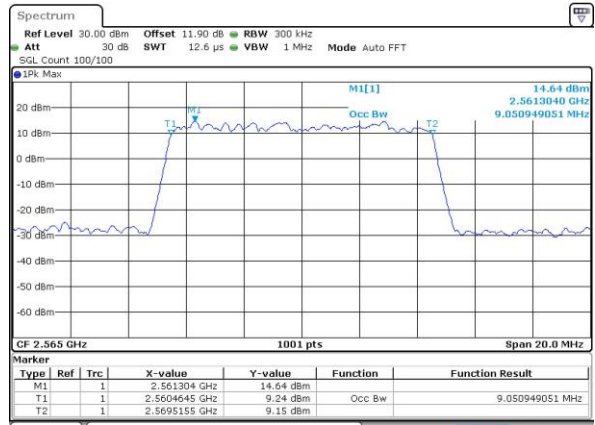
Date: 15 AUG 2018 16:36:38

Highest Channel / 5MHz / 64QAM



Date: 15 AUG 2018 16:10:10

Highest Channel / 10MHz / 64QAM

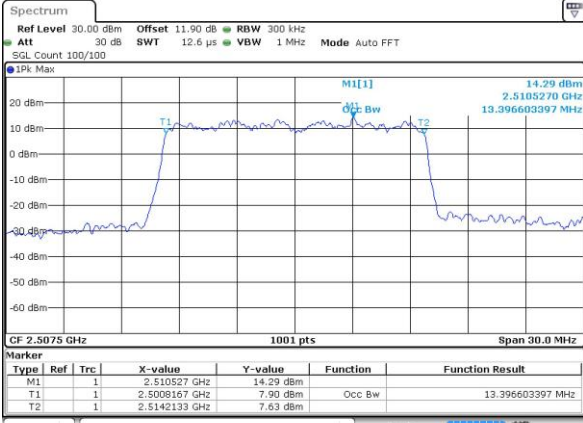


Date: 15 AUG 2018 16:38:10



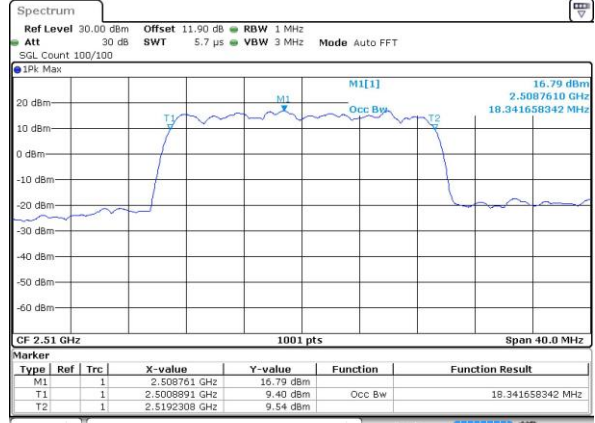
LTE Band 7

Lowest Channel / 15MHz / 64QAM



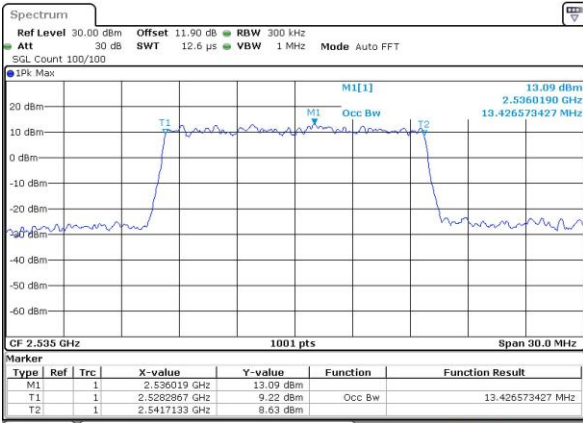
Date: 15 AUG 2018 17:00:45

Lowest Channel / 20MHz / 64QAM



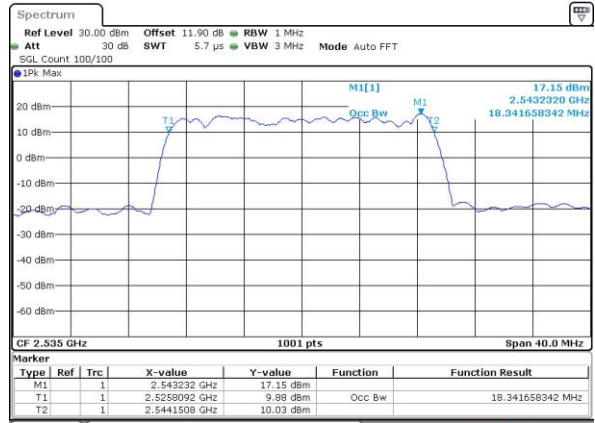
Date: 15 AUG 2018 17:28:45

Middle Channel / 15MHz / 64QAM



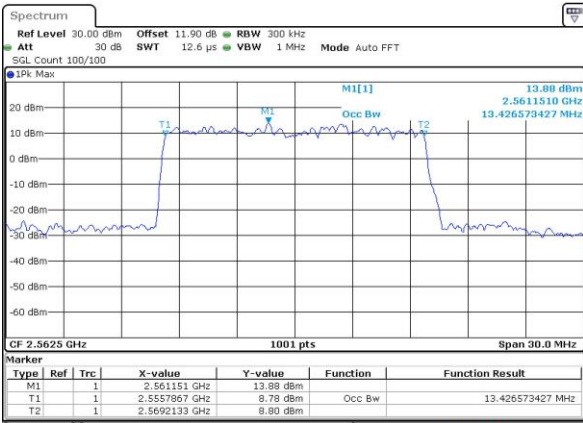
Date: 15 AUG 2018 17:04:39

Middle Channel / 20MHz / 64QAM



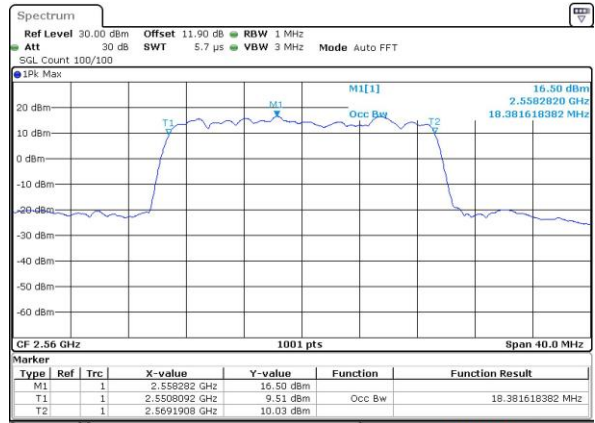
Date: 15 AUG 2018 17:32:38

Highest Channel / 15MHz / 64QAM



Date: 15 AUG 2018 17:06:11

Highest Channel / 20MHz / 64QAM



Date: 15 AUG 2018 17:34:11